

REMARKS

Claims 1-23 are pending. By this amendment, claims 1-7 are canceled due to the restriction requirement of this application and the Applicants' election of claims 8-23 to prosecute further in this application. Claims 8-23 are unchanged in this Response. Applicants gratefully acknowledge the Examiner's indication that Claims 12 and 21 contain allowable subject matter.

Claims 8-11, 13-20, 22 and 23 stand rejected under the references of record. Specifically, Claims 8, 9, 13-17, 20, 22 and 23 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,191,693 ("Umetsu") or U.S. Patent No. 5,729,963 ("Bird") in view of U.S. Patent No. 4,198,166 ("Tuns") or U.S. Patent No. 2,899,783 ("Otto"). Also, claims 10, 11, 18 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Umetsu and Bird in view of Tuns or Otto, and further in view of U.S. Patent No. 5,943,211 ("Sato").

Independent Claim 8 recites a part processing machine for depositing parts in compartments of a carrier tape, the machine including support means for supporting the carrier tape, advancing means for advancing the carrier tape through the machine, pick-and-place means for depositing the parts in the compartments of the carrier tape, and vibrating means for vibrating the carrier tape to cause the parts to settle into the compartments. (Underlining added for emphasis).

Umetsu discloses a tape conveying apparatus for conveying carrier tape 3, placing parts P in compartments 3a of the carrier tape 3 with a robot hand H and covering the carrier tape 3 with cover tape 5 to seal the parts P between the carrier tape 3 and the cover tape 5. The tape conveying apparatus includes a parts mounting reel 6 for advancing the tapes 3, 5 and taking up the tapes 3, 5 after the carrier tape 3 is filled with parts P and covered by the cover tape 5. As indicated by the Examiner in the Office action, "[Umetsu] lack[s] the use of vibrating means to settle the products in the compartments" (Page 2, last paragraph).

Bird discloses a carrier tape 100 including a plurality of pockets defined by side walls 114. The carrier tape 100 is useable with a part packaging apparatus including a component loader 210 for loading components 118 into the pockets of the carrier tape 100, a cover tape 120 delivered from a roll 212, an applicator 214 for securing the cover tape 120 to the carrier tape 100, and a reel 216 about which loaded carrier tape 100 is wound. As indicated by the Examiner in the Office action, "[Bird] lack[s] the use of vibrating means to settle the products in the compartments" (Page 2, last paragraph).

Tuns discloses a device for shaking packages containing powdery or granular material in order to densify the material in the packages. The device includes folding mandrels 5 for folding the packages, an endless chain 6 for advancing the packages, a dosing device 7 for filling the packages with powdery material, vibratory platforms 13 for shaking the packages after they have been filled with powdery material, and a closing device for closing the packages after shaking the packages. The packages are advanced to a position over the vibratory platforms 13, lifted vertically above the endless chain 6 and shaken vertically by a push rod 14 and a cam 14a. Tuns does not disclose a part processing machine for depositing parts in compartments of a carrier tape.

Otto discloses an electromagnetic packaging apparatus for packaging nails into containers 34. A moving conveyor 35 carries the containers 34 across a platform 36 to a filling position where nails are loaded into the containers 34. A section 36a of the platform 36 directly beneath the conveyor is resiliently supported by springs 46a above a vibrator 46. Vibration exerted on the platform section 36a causes the nails to be further settled down evenly in the container 34. Otto does not disclose a part processing machine for depositing parts in compartments of a carrier tape.

In proceedings before the Patent and Trademark Office, the Examiner bears the burden of presenting a *prima facie* case of obviousness based upon the prior art. In re Fritch, 972 F.2d 1260, 1265, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992); In re Fine, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The test for obviousness is what the combined teachings of the prior art would have suggested to one of ordinary skill in the art. In re Keller, 642 F.2d 413, 425, 208 U.S.P.Q. 871, 881 (CCPA 1981).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. In re Vaack, 947 F.2d 488, 493, 20 U.S.P.Q. 2d 1438, 1442 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. Id. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 985, 180 U.S.P.Q. 580, 583 (CCPA 1974); MPEP §§706.02(j), 2143.03.

In addition, the mere fact that the prior art structure could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing so. In re

Gordon, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984); In re Mills, 916 F.2d 680, 682, 16 U.S.P.Q.2d 1430, 1432 (Fed. Cir. 1990); MPEP §2143.01.

"A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984); MPEP §2141.02. It is improper to combine references where the references teach away from their combination. In re Grasselli, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983); MPEP §2145(X)(D)(2).

Further, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d at 902, 221 U.S.P.Q. at 1127.

Applicants respectfully submit that there is no motivation to combine the references as proposed by the Examiner. Specifically, Umetsu discloses a carrier tape conveying and packaging apparatus, Bird discloses a carrier tape useable with a carrier tape packaging apparatus, Tuns discloses a device for shaking packages containing powdery or granular material in order to densify the material in the packages, and Otto discloses an electromagnetic packaging apparatus for packaging nails into containers. There is no motivation within the references to combine the teachings of Tuns or Otto with the teachings of Umetsu or Bird, or vice versa. In addition, one of ordinary skill in the art of carrier tape packaging apparatuses would not look to the art of powdery material packaging or to the art of nail packaging to cure the deficiencies of carrier tape packaging apparatuses. The only motivation for the claimed part processing machine for depositing parts in compartments of a carrier tape comes from Applicants' invention, and therefore, the Examiner's rejection is a classic case of hindsight.

Similarly, Applicants respectfully submit that the references actually teach away from the combination suggested by the Examiner. Specifically, Tuns discloses a device for shaking packages containing powdery material that includes a vibratory platform 13, a push rod 14 and a cam 14a. The vibratory platform 13, upon which the packages are positioned, is lifted vertically above the other packages 13 and vertically vibrated by the push rod 14 and cam 14a. The lifting of the packages and the vibration created by the push rod 14 and cam 14a is solely for the purpose of densifying the powdery material in the packages as they are moved along the powdery material packaging device. Umetsu and Bird disclose carrier tape packaging apparatuses that would not be able to accommodate such a packaging and vibrating process

because Umetsu and Bird do not package powdery materials. One of ordinary skill in the art of powdery material packaging would not look to the art of carrier tape packaging apparatuses, or vice versa, to cure the deficiencies of powdery material packaging, or the carrier tape packaging apparatuses. The only motivation for the claimed part processing machine comes from Applicants' invention, and therefore, the Examiner's rejection is a classic case of hindsight. Also, Otto discloses an electromagnetic packaging apparatus for packaging nails into containers. The vibrator 46 of Otto is positioned underneath and vibrates a platform section 36a, upon which a package of nails is positioned. The vibration of the platform section 36a vibrates the package of nails and causes the nails to settle toward the bottom of the package. Such a packaging and vibrating process is solely for the purpose of packaging nails. Umetsu and Bird disclose carrier tape packaging apparatuses that place components in pockets of carrier tape and that would not be able to accommodate such a nail packaging and vibrating process because Umetsu and Bird do not package nails. One of ordinary skill in the art of packaging nails would not look to the art of carrier tape packaging apparatuses, or vice versa, to cure the deficiencies of nail packaging, or carrier tape packaging apparatuses. The only motivation for the claimed part processing machine comes from Applicants' invention, and therefore, the Examiner's rejection is a classic case of hindsight.

In addition, a combination of Tuns or Otto with Umetsu or Bird would not have a reasonable expectation of success, thereby further showing that there is no motivation to combine the teaching of the references as proposed by the Examiner. Specifically, the vibratory platform 13, the push rod 14 and the cam 14a of Tuns combined with either of the carrier tape packaging apparatuses of Umetsu or Bird would not have a reasonable expectation of success. The platform 13 of Tuns is vertically raised by the rod 14 and cam 14a to raise one of the packages above the other packages and shake the raised package. The platform 13, rod 14 and cam 14a could not be combined with either of the carrier tape packaging apparatuses of Umetsu or Bird because the component pockets (3a in Umetsu, defined by walls 114 in Bird) can not be raised relative to other component pockets and shaken. Raising and shaking one of the component pockets in such a manner would also raise the other adjacent component pocket (because they are all defined in a single carrier tape) and deform the tape, break the tape or disconnect the carrier tape from an advancing mechanism of the packaging apparatus, thereby making the carrier tape advancing mechanism inoperable and the combination unsuccessful. Raising and shaking the carrier tape in the manner disclosed in Tuns would also unsettle the

components already positioned in the downstream component pockets. Also, the nail packaging apparatus of Otto combined with either of the carrier tape packaging apparatuses of Umetsu or Bird would not have a reasonable expectation of success. The vibrator 46 used to vibrate the container 34 of nails provides sufficient vibration to vibrate and settle the nails toward the bottom of the container 34. Combining the vibrator 46 of Otto with the carrier tape apparatuses of Umetsu or Bird and vibrating the carrier tape with the vibrator 46 would vibrate the components out of the components pockets of Umetsu and Bird because the amount of vibration necessary to vibrate and settle nails vastly exceeds an amount of vibration used to sufficiently vibrate and settle components in the component pockets of the carrier tape.

Further, Assuming *arguendo* that the teachings of Umetsu or Bird and Tuns or Otto could or should be combined, Applicants respectfully point out that, even with the modification suggested by the Examiner in the present Office action, the claimed part processing machine for depositing parts in compartments of a carrier tape is not provided by the references.

Accordingly, Applicants respectfully submit that the Examiner has failed to present a *prima facie* case of obviousness of claim 8 based upon the prior art as required by 35 U.S.C. §103.

For these and other reasons, Umetsu, Bird, Tuns and Otto, alone or in combination, do not teach or suggest the subject matter defined by independent claim 8. Accordingly, independent claim 8 is allowable. Claims 9-15 depend from independent claim 8 and are allowable for the same and other reasons.

Independent Claim 16 recites a method for packaging parts in a carrier tape, the carrier tape being advanceable by a taper apparatus and including a plurality of compartments, the method including loading a part into one of the plurality of compartments, activating a vibrator module to produce a vibration, and transferring the vibration to the carrier tape to settle the part within the compartment. (Underlining added for emphasis).

As discussed above, the Examiner indicates in the Office action that "[Umetsu and Bird] lack the use of vibrating means to settle the products in the compartments" (page 2, last paragraph). Also as discussed above, Tuns and Otto do not disclose a part processing machine for depositing parts in compartments of a carrier tape. Accordingly, Tuns and Otto do not disclose a method for packaging parts in a carrier tape.

Applicants respectfully submit that there is no motivation to combine the references as proposed by the Examiner. Specifically, Umetsu discloses a carrier tape conveying and

packaging apparatus, Bird discloses a carrier tape useable with a carrier tape packaging apparatus, Tuns discloses a device for shaking packages containing powdery or granular material in order to densify the material in the packages, and Otto discloses an electromagnetic packaging apparatus for packaging nails into containers. There is no motivation within the references to combine the teachings of Tuns or Otto with the teachings of Umetsu or Bird, or vice versa. In addition, one of ordinary skill in the art of carrier tape packaging apparatuses would not look to the art of powdery material packaging or to the art of nail packaging to cure the deficiencies of carrier tape packaging apparatuses. The only motivation for the claimed method for packaging parts in a carrier tape comes from Applicants' invention, and therefore, the Examiner's rejection is a classic case of hindsight.

Similarly, Applicants respectfully submit that the references actually teach away from the combination suggested by the Examiner. Rather than re-present the arguments set forth above with respect to this contention, for brevity's sake, Applicants refer to the discussion above for claim 8. With respect to claim 16, the same arguments apply to the contention that the references actually teach away from the combination suggested by the Examiner.

In addition, a combination of Tuns or Otto with Umetsu or Bird would not have a reasonable expectation of success, thereby further showing that there is no motivation to combine the references as proposed by the Examiner. Rather than re-present the arguments set forth above with respect to this contention, for brevity's sake, Applicants refer to the discussion above for Claim 8. With respect to Claim 16, the same arguments apply to the contention that a combination of the references would not have a reasonable expectation of success.

Further, Assuming *arguendo* that the teachings of Umetsu or Bird and Tuns or Otto could or should be combined, Applicants respectfully point out that, even with the modification suggested by the Examiner in the present Office action, the claimed method for packaging parts in a carrier tape is not provided by the references.

Accordingly, Applicants respectfully submit that the Examiner has failed to present a *prima facie* case of obviousness of claim 16 based upon the prior art as required by 35 U.S.C. §103.

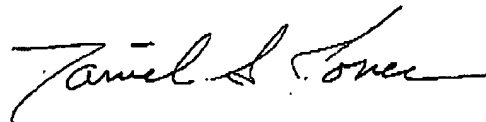
For these and other reasons, Umetsu, Bird, Tuns and Otto, alone or in combination, do not teach or suggest the subject matter defined by independent claim 16. Accordingly, independent claim 16 is allowable. Claims 17-23 depend from independent claim 16 and are allowable for the same and other reasons.

CONCLUSION

In view of the foregoing, entry of the present Response and allowance of claims 8-23 are respectfully requested.

The undersigned is available for telephone consultation during normal business hours.

Respectfully submitted,



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